UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,427	05/13/2005	Uwe Hansmann	DE920020020US1	3070

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EXAMINER
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ART UNIT	PAPER NUMBER
2109	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/516,427	HANSMANN ET AL.
	Examiner	Art Unit	
	Hee Soo Kim	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 11/30/06

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1~23 are presented for examination.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 11/30/2004 was filed after the mailing date of 11/30/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

Claim 22 is objected to because of the following informalities:

- The preamble should read as: "A system for exchange of data between a plurality of clients and at least one back end data store by using a central synchronization server having a connection to said, said clients..."

- There is a mistyped word: "...connected to said central synchonization server..."

Appropriate corrections are required.

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22, 2~4, 14, 15, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as

being anticipated by Butrico et al. hereinafter Butrico (Enterprise Data Access from

Mobile Computers: An End-to-end Story. IEEE 2/28/2000).

Regarding Claim 22, Butrico teaches a system for exchange of data between a

plurality of clients and at least one back end data store by using a central

synchronization server having a connection to said clients generating data to be

synchronized, said system comprising:

a. a sync engine for performing synchronization with said central

synchronization server and connected to said central synchronization server (Pg. 14,

Section 4.2);

b. a single back end neutral interface associated with and connected to said

sync engine (Pg. 11, Left-Col., Lines 10~22); and

c. a component assigned to each of said at least one back end data store, each

of said components comprising a back end dependent part having an interface with said

single back end neutral interface and an interface with said assigned back end data

store (Pg. 11, Left-Col., Lines 10~22) and (Pg. 14, Section 4.2).

Regarding Claim 2, Butrico teaches each of said components further comprises

an abstract Back End independent part, wherein said abstract Back End independent

part provides common functionalities for use by all the Back End dependent parts (Pg.

11, Left-Col., Lines 10~22).

Regarding Claim 3, Butrico teaches at least one back end data store is assigned

its own said component (Pg. 11, Left-Col., Lines 10~22).

Regarding Claim 4, Butrico teaches exchange of data is synchronization of data

(Pg. 11, Right-Col., Lines 20~22).

Regarding Claim 14, Butrico teaches clients are mobile clients (Pg. 11, Right-

Col., Lines 20~22).

Regarding Claim 15, Butrico teaches SyncML is employed as a synchronization

protocol [Examiner's Note: Although the prior art uses MSDP protocol for

synchronization, it is inherent to utilize SyncML as an alternative protocol to synchronize

data with different message structure].

Regarding Claim 17, Butrico teaches the back end specific part is inherited from

an abstract back end independent part assigned to said back end data store (Pg. 11,

Left-Col., Lines 10~22).

Regarding Claim 19, Butrico teaches data objects contain meta-data (Pg. 11, Right-Col., Lines 34~36).

Regarding Claim 20, Butrico teaches synchronization protocol used exclusively between said client and said synch server is SyncML and the update received by said synch server is presented as XML documents [Examiner's Note: It is inherent and obvious to one with ordinary skill in the art, data synchronization using SyncML protocol are XML documents].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5~13, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butrico et al. hereinafter Butrico (Enterprise Data Access from Mobile Computers: An End-to-end Story. IEEE 2/28/2000) in view of Kloba et al. hereinafter Kloba (U.S Patent#6,341,316).

Regarding Claim 5, while Butrico does not disclose a cache for buffering and replication purposes, it does not limit the system's functionality or goals of improving performance and bandwidth between the client/server. Furthermore, it would be impossible to improve the synchronization performance without the use of cache to solve such bandwidth problem. Examiner notes though in Kloba's invention, a synchronizing system between client/server further comprises a caching mechanism (down transmission) to the client tprovided by the server extension module (Fig. 1X, Col. 20, Lines 35~54). Although the caching mechanism is performed to the client, it would have been obvious to one with ordinary skill in the art, to modify the mechanism allowing the cache to also perform in the "up" (to the backend data store) transmission. The modification would solve the bandwidth problem presented in synchronizing data between the client/server.

Regarding Claim 6, as stated in claim 5, Butrico does not disclose caching mechanism for buffering and replication purposes using a backend monitor. Examiner notes though in Kloba's invention, a caching mechanism with a feature similar to the back end monitor (Fig. 1X, Col. 20, Lines 35~54). The use of the server extension module allows synchronization from the data store to the client. It would have been an obvious modification so that the module also allows "up" transmission to the data store. The modification would thus enable updated data from each individual back end data store to be stored at the cache.

Regarding Claim 7, as stated in claim 5, Butrico does not disclose caching mechanism for buffering and replication purposes using a cache monitor. Examiner

notes though in Kloba's invention, a caching mechanism with a feature similar to the cache monitor (Fig. 1X, Col. 20, Lines 35~54). The use of the server extension module allows synchronization from the data store to the client. It would have been an obvious modification so that the module also allows "up" transmission to the data store. The modification would thus enable data replication from the cache to the back end data store.

Regarding Claim 8, as stated in claim 5, Butrico does not disclose caching mechanism for buffering and replication purposes has a back end manager. Examiner notes though in Kloba's invention, a caching mechanism with a feature similar to the back end monitor (Fig. 1X, Col. 20, Lines 35~54). The use of the server extension module allows synchronization from the data store to the client. It would have been an obvious modification so that the module also allows "up" transmission to the data store. The modification would thus enable updated data from each individual back end data store to be stored at the cache.

Regarding Claim 9, the claim is rejected based on the same rationale from claims 5, 10~12.

Regarding Claim 10, Although Butrico does not disclose a persistent store used as a caching mechanism, Kloba teaches the server maintains state information of the client performed by the web and database modules (Col. 23, Lines 16~19). These modules are further driven by the server extension module to allow synchronization from the data store to the client. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to utilize a persistent store to

allow data end store data reside in the cache for faster synchronization performance between mobile devices and the server.

Regarding Claim 11, Butrico teaches individual data exchange operations are batched instead of using individual data exchange operations (Pg. 12, Section 3.2). Although Butrico does not disclose caching mechanism for buffering and replication purposes, Kloba teaches a caching mechanism (as stated in claim 5) with a feature similar to the cache monitor.

Regarding Claim 12, Butrico teaches individual data exchange operations are batched instead of using individual data exchange operations (Pg. 12, Section 3.2). Although Butrico does not disclose caching mechanism for buffering and replication purposes, Kloba teaches a caching mechanism (as stated in claim 5) with a feature similar to the back end monitor.

Regarding Claim 13, While Butrico does not disclose a cache and at least one back end data store are databases; it is obvious a cache is a form of memory medium or a database capable of storing data. The need for a cache to allow faster synchronization between the client and server is well known in the art. Furthermore, Kloba teaches the database module controls access to databases associated with the server (Col. 8, Lines 47~52). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to utilize a persistent store to allow data end store data reside in the cache for faster synchronization performance between mobile devices and the server.

Regarding Claim 23, Butrico teaches a method for synchronization of data, said method comprising the steps of:

a. receiving a sync session request from a client (Pg. 12, Section 3.2);

b. authenticating said client against a sync server (Pg. 12, Section 3.2);

c. receiving an update from said client (Pg. 12, Section 3.2);

d. authenticating said client against a back end data store via a content adaptable framework interface using a back end monitor (Pg. 12, Section 3.2);

e. creating data objects and filling in the update received from said client by said sync server (Pg. 12, Section 3.2);

f. calling said content adaptable framework interface and forwarding said data objects (Pg. 12, Section 3.2);

g. selecting an appropriate back end specific part of a component assigned to said back end data store (Pg. 11, Left-Col., Lines 10~22) and (Pg. 14, Section 4.2);

h. transforming a content adaptable framework of said data objects into a back end specific format (Pg. 11, Left-Col., Lines 10~22) and (Pg. 14, Section 4.2); and

i. executing the update by calling the back end specific part and passing the data objects to the back end specific part (Pg. 11, Left-Col., Lines 10~22) and (Pg. 14, Section 4.2).

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are

applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hee Soo Kim whose telephone number is (571) 270-3229. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on (571) 272-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HSK
8/13/07

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